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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,849	10/24/2001	Seppo Salminen	309-010322-US (PAR)	6896
2512	7590	11/23/2004	EXAMINER	
PERMAN & GREEN 425 POST ROAD FAIRFIELD, CT 06824			PHAM, TUAN	
			ART UNIT	PAPER NUMBER
			2643	

DATE MAILED: 11/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,849

Applicant(s)

SALMINEN ET AL.

Examiner

TUAN A PHAM

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 06/05/03, 06/24/02, 6/16/02, 2/15/02.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1- 3, 5, and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Parker et al. (U.S. Patent No.: 5,576,981, hereinafter "Parker").

Regarding claim 1, Parker teaches a handset comprising (see figure 1, portable bar code reader):

a housing (see figure 2A, housing 103) having a display (see figure 2A, display) and first keypad (see figure 2A, first key pad 200), the first keypad being removeably coupled to the housing (see col.4, ln.45-65);

circuitry within the housing, the circuitry adapted to interface with the display and the first keypad (see figure 3, col.4, ln.45-65, it is inherently that the handset should be include the circuitry to control the keypad or display); and

a second keypad (see figure 2B, second keypad 202), the second keypad exchangeable with the first keypad; wherein the second keypad is adapted to replace the first keypad on the housing when the first keypad is removed from the housing (see col.4, ln.45-65).

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Regarding claim 2, Parker further teaches the handset wherein the circuitry is adapted to detect whether the first keypad or the second keypad is interfacing with the circuitry (see col.4, ln.52-65).

Regarding claim 3, Parker further teaches the handset wherein the circuitry is adapted to detect a first resistance of the first keypad (see col.4, ln.52-65).

Regarding claim 5, Parker further teaches the handset further comprising an illumination source, wherein the illumination source illuminates the first or second keypad when the first or second keypad is coupled to the housing (see figure 1, indicator 108, col.4, ln.19-32).

Regarding claim 21, Parker teaches a handheld electronic device comprising (see figure 2A):

a housing (see figure 2A, housing 103, col.4, ln.51-53);

circuitry disposed in the housing (see figure 3), the circuitry including a controller programmed to operate the circuitry (see figure 3, keyboard processor, col.4, ln.55-65) in accordance with a predetermined characteristic of the electronic device; and a user interface mounted to the housing for interfacing with the circuitry (see figure 3, keypad 302), the user interface being selected from a number of different user interfaces having different predetermined interface characteristics (see figure 2A, 2B, keypad 200, keypad 202, col.4, ln.46-65, col.5, ln.1-26).

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Regarding claim 22, Parker further teaches the device wherein the user interface has a predetermined interface characteristic corresponding to the predetermined characteristic of the device (see col.6, ln.6-24, col.7, ln.1-8).

Regarding claim 23, Parker teaches a handheld electronic device comprising (see figure 2A):

a housing (see figure 2A, housing 103, col.4, ln.51-53);

circuitry disposed in the housing (see figure 3), the circuitry including a controller programmed to operate the circuitry and provide the device with multiple applications (see figure 3, keyboard processor, col.4, ln.55-65)); and

an interchangeable user interface removably mounted to the housing for interfacing with the circuitry (see figure 2A, 2B, keypad 200, keypad 202, col.4, ln.45-65), the user interface being interchangeable with a number of different interchangeable user interfaces with different predetermined characteristics (see figure 2A, 2B, keypad 200, keypad 202, col.4, ln.45-65).

Regarding claim 24, Parker further teaches the device wherein when the interchangeable user interface is interchanged with another of the number of different interchangeable user interfaces the device is changed from a first application to a second application (see col.4, ln.1-18).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 4, 7-13, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. (U.S. Patent No.: 5,576,981, hereinafter "Parker") in view of Hyun et al. (Pub. No.: US 2002/0132640, hereinafter, "Hyun").

Regarding claim 4, Parker teaches a handset comprising (see figure 1, portable bar code reader):

a housing (see figure 2A, housing 103) having a display (see figure 2A, display) and first keypad (see figure 2A, first key pad 200), the first keypad being removeably coupled to the housing (see col.4, ln.45-65);

circuitry within the housing, the circuitry adapted to interface with the display and the first keypad (see figure 3, col.4, ln.45-65, it is inherently that the handset should be include the circuitry to control the keypad or display); and

a second keypad (see figure 2B, second keypad 202), the second keypad exchangeable with the first keypad; wherein the second keypad is adapted to replace the first keypad on the housing when the first keypad is removed from the housing (see col.4, ln.45-65).

It should be noticed that Parker fails to clearly teach the handset wherein the first keypad has a different number of keys than the second keypad. However, Hyun teaches such features (see figure 7A, first keypad 41, second keypad 43, col.3, [0044]) for a purpose of supporting different function.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the handset wherein the first keypad has a different number of keys than the second keypad, as taught by Hyun, into view of Parker in order to conveniently operate the keypad with multiple functions.

Regarding claim 7, Parker teaches a handset wherein the first keypad has a larger number of keys than the second keypad and wherein the second keypad has larger keys than the first keypad (see figure 7A, first keypad 41, second keypad 43).

Regarding claim 8, Parker teaches a handset wherein the first keypad is adapted to be used with a cordless telephone application and wherein the

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second keypad is adapted to be used with a game application (col.3, [0044, 0046]).

Regarding claims 9 and 15, Parker teaches a handset comprising:

a housing having a display and a keypad (see figure 2A, display, keypad 200, housing 103, col.4, ln.45-65); and

circuitry within the housing, the circuitry adapted to interface with the keypad and the display (see figure 3, col.4, ln.45-65, it is inherently that the handset should be include the circuitry to control the keypad or display);

a first keypad removeably coupled to the housing (see figure 2A, first keypad 200, col.4, ln.45-65); and

a second keypad (see figure 2B, second keypad 202), the second keypad exchangeable with the first keypad; wherein the second keypad is adapted to be removeably coupled to the housing when the first keypad is removed from the housing (see col.4, ln.45-65).

It should be noticed that Parker fails to clearly teach a portables phone. However, Hyun teaches such features (see figure 1, portable phone 100) for a purpose of exchangeable the information.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of portable phone, as taught by Hyun, into view of Parker in order to communicate in wireless fashion.

Regarding claim 10, Parker teaches a handset wherein the first keypad at least partially conceals the telephone keypad (see figure 2A, keypad 200).

Regarding claim 11, Parker teaches a handset wherein the telephone circuitry is adapted to detect whether the first keypad or the second keypad is interfacing with the telephone circuitry (see col.4, ln.45-65).

Regarding claim 12, Parker teaches a handset wherein the telephone circuitry is adapted to detect a first resistance of the first keypad or a second resistance of the second keypad where the first resistance is different than the second resistance (see figure 2A, 2B, col.4, ln.45-65).

Regarding claim 13, Parker teaches a handset wherein the first keypad has a larger number of keys than the second keypad and wherein the second keypad has larger keys than the first keypad (see figure 7A, first keypad 41, second keypad 43).

Regarding claim 16, Parker teaches the method of exchanging a keypad further comprising the step of providing circuitry within the housing, the circuitry being adapted to interface with the display and the first keypad (see figure 3, keypad 302, display 303).

Regarding claim 17, Parker teaches the method of exchanging a keypad further comprising the step of sensing presence of the second keypad (see col.4, ln.51-55, it is obvious that the circuit of a device should includes a detector for detecting the keypad whenever it remove or insert into the housing).

Regarding claim 18, Parker teaches the method of exchanging a keypad wherein the step of sensing presence of the second keypad comprises sensing a resistance of the second keypad (see col.4, ln.51-55, it is obvious that the circuit

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of a device should includes a detector for detecting the keypad whenever it remove or insert into the housing).

Regarding claim 19, Hyun teaches the method of exchanging a keypad further comprising the step of changing a user application of the cordless handset (col.3, [0044, 0046], support both game and data).

Regarding claim 20, Hyun teaches the method of exchanging a keypad further comprising the step of illuminating the second keypad (see figure 1, indicator 108, col.4, ln.19-32).

5. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. (U.S. Patent No.: 5,576,981, hereinafter "Parker") in view of Binstead (U.S. Patent No.: 4,954,823).

Regarding claim 6, Parker teaches a handset comprising (see figure 1, portable bar code reader):

a housing (see figure 2A, housing 103) having a display (see figure 2A, display) and first keypad (see figure 2A, first key pad 200), the first keypad being removeably coupled to the housing (see col.4, ln.45-65);

circuitry within the housing, the circuitry adapted to interface with the display and the first keypad (see figure 3, col.4, ln.45-65, it is inherently that the handset should be include the circuitry to control the keypad or display); and

a second keypad (see figure 2B, second keypad 202), the second keypad exchangeable with the first keypad; wherein the second keypad is adapted to

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replace the first keypad on the housing when the first keypad is removed from the housing (see col.4, ln.45-65).

It should be noticed that Parker fails to clearly teach the keypad is transparent. However, Binstead teaches such features (see abstract) for a purpose of making a keypad with clear display.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of keypad is transparent, as taught by Binstead, into view of Parker in order to make keypad with attractive look.

6. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Parker et al. (U.S. Patent No.: 5,576,981, hereinafter "Parker") in view of Fellegara et al. (Pub. No.: US 2001/0015760, hereinafter, "Fellegara").

Regarding claim 14, Parker teaches a handset comprising:

a housing having a display and a keypad (see figure 2A, display, keypad 200, housing 103, col.4, ln.45-65); and

circuitry within the housing, the circuitry adapted to interface with the keypad and the display (see figure 3, col.4, ln.45-65, it is inherently that the handset should be include the circuitry to control the keypad or display);

a first keypad removeably coupled to the housing (see figure 2A, first keypad 200, col.4, ln.45-65); and

a second keypad (see figure 2B, second keypad 202), the second keypad exchangeable with the first keypad; wherein the second keypad is adapted to be

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removeably coupled to the housing when the first keypad is removed from the housing (see col.4, ln.45-65).

It should be noticed that Parker fails to clearly teach the keypad further comprises a camera interface. However, Fellegara teaches such features (see col.8, [0061]) for a purpose of interfacing camera device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the use of the keypad further comprises a camera interface, as taught by Fellegara, into view of Parker in order to operate the camera through a keypad.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In order to expedite the prosecution of this application, the applicants are also requested to consider the following references. Although Pan et al. (U.S. Patent No. 6,748,248), Lieberman et al. (U.S. Patent No. 6,385,463), Boubelik (U.S. Patent No. 5,365,570), and Ieman (U.S. Patent No. 6,266,234) are not applied into this Office Action; they are also called to Applicants attention. They may be used in future Office Action(s). These references are also concerned for supporting the system and method of wireless communication device with detachable flip keyboard.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Tuan A. Pham** whose telephone number is (703) 305-4987. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Curtis Kuntz can be reached on (703) 305-4708 and **IF PAPER HAS BEEN MISSED FROM THIS OFFICIAL ACTION PACKAGE, PLEASE CALL Customer Service at (703) 306-0377 FOR THE SUBSTITUTIONS OR COPIES.**

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November 17, 2004
Examiner

Tuan Pham


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
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